

CLAIMS

1. A method of automatically controlling fraud in an electronic transaction system, characterized in that it comprises the steps of:

5 · when a user initiates a session in the electronic transaction system, generating an element and storing the element in a database in association with information identifying the user;

10 · each time during the session the user commands the execution of an operation, determining an equation that is satisfied by the element stored in the database;

15 · when a sufficient given number of operations has been effected, solving the system of equations consisting of the equations determined as above to deduce the element therefrom; and

20 · by consulting the database, deducing from the element obtained in this way the corresponding information identifying the user.

25 2. A method according to claim 1, characterized in that the equations of the system of equations are independent.

30 3. A method according to claim 1 or claim 2, characterized in that the equations are linear equations.

35 4. A method according to any one of claims 1 to 3, characterized in that the element consists of a series of numerical coefficients.

40 5. A method according to claim 4, characterized in that the series of coefficients defines an equation of a hyperplane (H) having (n-1) dimensions in a space (E) having n dimensions and, each time the user commands the execution of an operation, the step of determining an equation consists in determining the coordinates

$$(X_i^1, X_i^2, \dots, X_i^n)$$

of a point (P_i) in the hyperplane (H) .

6. A method according to claim 5, characterized in that
the series of coefficients defines an equation of a line
5 (D) in a space (E) having two dimensions and, each time
the user commands the execution of an operation, the step
of determining an equation consists in determining the
coordinates (X_i, Y_i) belonging to that line (D) .
- 10 7. A method according to claim 4, characterized in that
the series of coefficients defines the coordinates
($X_1, X_2, \dots X_n$) of a point (P) in a space (E) having n
dimensions and, each time the user commands the execution
of an operation, the step of determining an equation
15 consists in determining the equation of a hyperplane (H_i)
containing the point (P) .
8. A method according to claim 7, characterized in that
the series of coefficients defines the coordinates
20 (X_1, X_2) of a point (P) in a space (E) having two
dimensions and, each time the user commands the execution
of an operation, the step of determining an equation
consists in determining the equation of line (D_i) passing
through the point (P) .
- 25 9. A system for automatically controlling fraud in an
electronic transaction system, characterized in that it
comprises first calculation means (108) for generating an
element when a user (300) initiates a session in the
30 electronic transaction system (200), a database (104) in
which the element is stored in association with
information identifying the user, the first calculation
means (108) being adapted to determine an equation that
the element stored in the database (104) satisfies each
35 time the user (300) commands the execution of an
operation in the session, and second calculation means
(110) adapted to solve the system of equations consisting

of the equations determined as above to deduce the element therefrom when a sufficient given number (n) of operations has been effected, so that, by consulting the database (104), it is possible to deduce from the element obtained in this way the corresponding information identifying the user (300).